

**CLAIMS**

We claim:

1           1.     Gray cast iron alloy for a friction element of a friction clutch having a  
2 friction surface for frictional contact with a clutch disk, wherein the alloy contains:

3                 3.0 – 3.4 percent by weight C;

4                 1.8 – 2.3 percent by weight Si;

5                 0.4 – 0.8 percent by weight Mn;

6                 0.0 – 0.35 percent by weight P;

7                 0.0 – 0.125 percent by weight S;

8                 0.4 – 0.6 percent by weight Mo; and

9                 a remainder comprising iron and production-related impurities and/or additives.

10           2.     A friction element for a friction clutch having friction surface for  
frictional contact with a clutch disk, wherein said friction element is formed of flake graphite  
alloy comprising:

3                 3.0 – 3.4 percent by weight C;

4                 1.8 – 2.3 percent by weight Si;

5                 0.4 – 0.8 percent by weight Mn;

6                 0.0 – 0.35 percent by weight P;

7                 0.0 – 0.125 percent by weight S;

8                 0.4 – 0.6 percent by weight Mo; and

9                 a remainder comprising iron and production-related impurities and/or additives.

1                    3.        The friction element of claim 2, wherein said friction element comprises  
2 a pressure plate.

1                    4.        The friction element of claim 2, wherein said friction element comprises  
2 a flywheel mass part.

1                    5.        The friction element of claim 2, wherein said friction element comprises  
2 an intermediate plate of a multidisk clutch.

1                    6.        The friction element of claim 2, wherein said friction element is cast and  
2 stress-relief annealed at a temperature within a range including 450°C to 600°C for a period of  
3 at least 2.5 hours after casting.

1                    7.        The friction element of claim 6, wherein said friction element is stress-  
2 relief annealed at a temperature within a range including 500°C to 550°C for a period of at  
3 least 3 hours.

1                    8.        The friction element of claim 3, wherein said friction element is cast and  
2 stress-relief annealed at a temperature within a range including 450°C to 600°C for a period of  
3 at least 2.5 hours after casting.

1                    9.        The friction element of claim 8, wherein said friction element is stress-  
2 relief annealed at a temperature within a range including 500°C to 550°C for a period of at  
3 least 3 hours.

4                   10.    The friction element of claim 4, wherein said friction element is cast and  
5 stress-relief annealed at a temperature within a range including 450°C to 600°C for a period of  
6 at least 2.5 hours after casting.

1                   11.    The friction element of claim 10, wherein said friction element is stress-  
2 relief annealed at a temperature within a range including 500°C to 550°C for a period of at  
3 least 3 hours.

4                   12.    The friction element of claim 5, wherein said friction element is cast and  
5 stress-relief annealed at a temperature within a range including 450°C to 600°C for a period of  
6 at least 2.5 hours after casting.

1                   13.    The friction element of claim 12, wherein said friction element is stress-  
2 relief annealed at a temperature within a range including 500°C to 550°C for a period of at  
3 least 3 hours.  
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